

1 the correct orientation associated with them for the first time, it will take a little training to be able to
2 associate the appropriate phoneme with the identified symbol using attentive vision and the left side of
3 their brains before they will be able to read a their peers' level. This process however is much easier than
4 the approach they have been using which is to use pre-attentive vision and their right side of their brains
5 and transferring this information to the left side of the brains to be used with speech, spelling and
6 language functions.

7 While the preferred embodiments have been shown and described, it will be understood that
8 there is no intent to limit the invention by such disclosure, but rather, is intended to cover all
9 modifications and alternate constructions falling within the spirit and scope of the invention as defined
10 in the appended claims.

11 CLAIMS

- 12 1. A method for training or testing vision, comprising the following steps:
13 creating a three-dimensional environment including at least two objects of shape, including a first
14 object and a second object, situated before a background;
15 positioning the first object and the second object to produce either movement cues, color cues
16 or depth cues; and
17 viewing the three dimensional environment and studying the response of an individual to viewing
18 the three dimensional environment.
- 19 2. The method of claim 1 wherein the space between the first object and the second object is
20 beyond the horizontal angular extent an individual is able to foveat using attentive vision;
- 21 3. The method according to claim 2, wherein the horizontal angular extent is 2 degrees of the entire
22 width field viewed by the individual.

1 4. The method according to claim 2, wherein the first object and the second object are positioned
2 to produce depth cues by varying the depth range difference between the first object and the second
3 object.

4 5. The method according to claim 2, further including the step of using sound, touch or smell.

5 6. The method according to claim 4, wherein the depth cues are provide within a range of a pre-
6 attentive depth perception limit.

7 7. The method according to claim 6, wherein the pre-attentive depth perception limit is
8 approximately 3 arcmin.

9 8. The method according to claim 4, further including the step of varying the textural contrast
10 between the background and the first and second objects.

11 9. The method according to claim 8, wherein the step of varying includes varying textural spatial
12 frequency

13 10. The method according to claim 8, wherein the step of varying includes varying color
14 composition.

15 11. The method according to claim 8, wherein the step of varying includes varying edge fidelity.

16 12. The method according to claim 8, wherein the step of varying includes varying noise.

17 13. The method according to claim 2, further including the step of varying the textural contrast
18 between the background and the first and second objects.

19 14. The method according to claim 2, wherein the background includes variations.

20 15. The method according to claim 1, wherein the method is applied in the treatment of dyslexia.

21 16. The method according to claim 15, wherein the step of studying includes applying the preceding
22 steps to teach individuals to utilize pre-attentive vision in reading.

1 17. The method according to claim 15, wherein applying includes calibrating attentive vision for
2 orientation determination by transitioning the correctly determined orientation of the pre-attentive vision
3 to the attentive vision of the foveal region.

4 18. The method according to claim 15, wherein the first object and the second object are similarly
5 shaped, but oriented differently.

6 19. The method according to claim 15, wherein depth cues and color cues are applied.

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